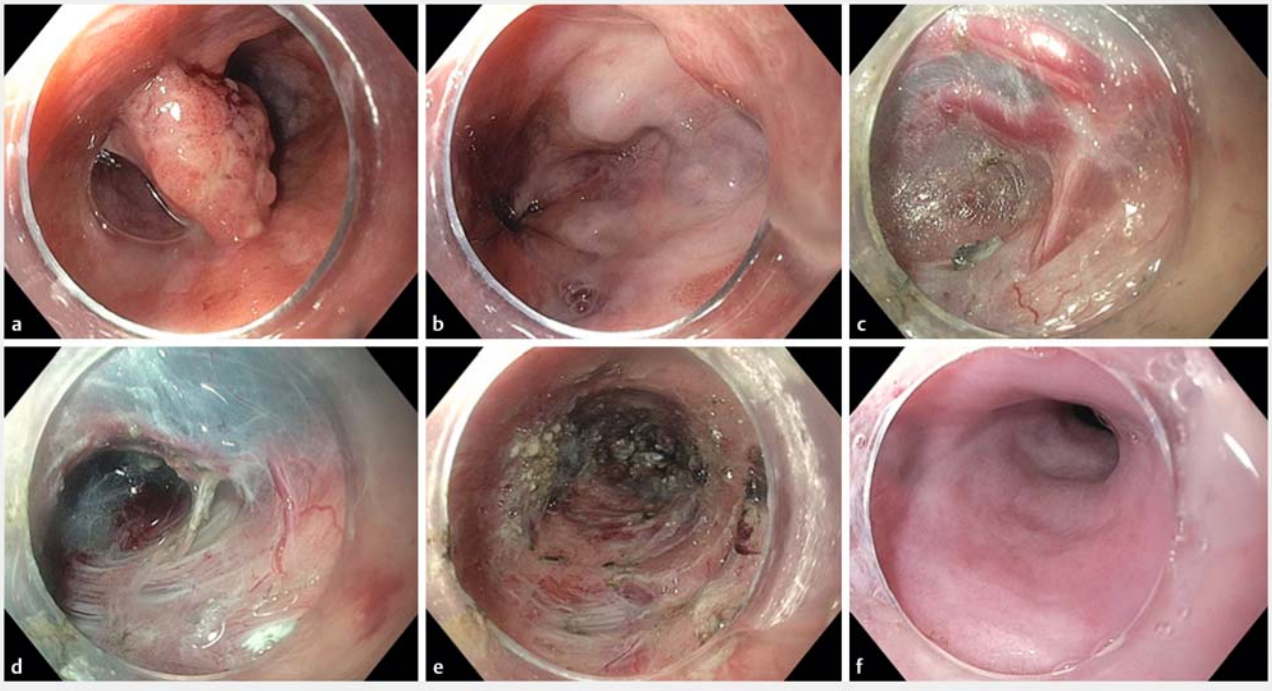
Endoscopic submucosal dissection for early esophageal and gastric neoplasia in decompensated cirrhosis with varices

Endoscopic management of gastrointestinal (GI) neoplasia in cirrhosis is challenging. Such patients are often poor candidates for surgery, yet their untreated cancer may preclude them from undergoing liver transplantation. Endoscopic submucosal dissection (ESD) offers curative resection but can be difficult in the setting of portal hypertension. Variceal band ligation may cause scarring that complicates esophageal ESD [1]. Pre-ESD transjugular intrahepatic portosystemic shunting carries procedural and hepatic encephalopathy risks. There are increasing data on the safety of endoscopic resection in patients with cirrhosis [2].

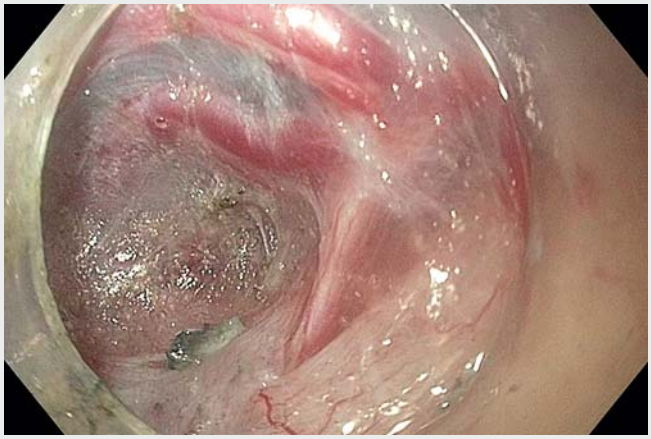
Case 1: A 62-year-old man with decompensated cirrhosis underwent endoscopy demonstrating grade II varices and Barrett's esophagus (C6M6), with a prominent 2-cm nodule (histology: adenocarcinoma) and multifocal nodularity (high grade dysplasia) with no other medical comorbidities (▶ **Fig. 1**). A 7-cm circumferential ESD was performed. Large varices were encountered in the submucosa during dissection and were obliterated with electrocautery using Coagrasper forceps. Histology revealed intramucosal carcinoma.

Case 2: An 80-year-old woman with decompensated cirrhosis underwent upper GI endoscopy with esophageal variceal banding. An irregular area was incidentally noted in the stomach, biopsies of which showed adenocarcinoma. The patient otherwise was in excellent overall health. ESD was performed on a 50-mm well demarcated lesion in the gastric body. Significant intraprocedural bleeding was encountered and was treated successfully with Coagrasper forceps, diluted epinephrine, and hemoclips. Histology revealed intramucosal adenocarcinoma (▶ **Video 1**).

There are limited reports on esophageal [3, 4] and gastric ESD [5] in patients with cirrhosis. We present the first case of circumferential esophageal ESD with direct variceal obliteration and the first reported Western case of gastric ESD in decompensated cirrhosis. Both patients underwent curative resections without adverse events, demonstrating the safety and effectiveness of ESD in patients with portal hypertension and varices.



▶ **Fig. 1** Endoscopic images of circumferential endoscopic submucosal dissection (ESD) and treatment of esophageal varices showing: **a** Barret's esophagus (C6M6), with a 2-cm nodule and multifocal nodularity; **b** scarring from previous banding and grade II esophageal varices; **c** a large plexus of submucosal varices encountered during dissection; **d** appearance after direct obliteration of the submucosal varices with Coagrasper forceps, leaving the vessels deflated; **e** appearance after a 7-cm circumferential ESD; **f** the healed resection site with new squamous mucosa and mild asymptomatic luminal narrowing at repeat endoscopy 5 months later.



Video 1 Circumferential endoscopic submucosal dissection of Barrett's esophagus-related neoplasia with direct obliteration of esophageal varices and endoscopic submucosal dissection of gastric adenocarcinoma in patients with cirrhosis.

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Competing interests

S. Wani is a consultant for Medtronic, Boston Scientific, and Interpace. R. Soetikno is a consultant for Olympus and Fujifilm. H. Hammad is a consultant for Olympus, Medtronic, and Cook Medical. The remaining authors declare that they have no conflict of interest.

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